1. A method for visually inspecting an electronic component assembly of a variety of components, said method comprises:

positioning said assembly comprising a plurality of surface-mounted components of different types, colors, orientations and terminal lead spacings, within the view of a color digitizing camera;

obtaining via said camera, an image of said assembly including said surface-mounted components;

scanning said image to obtain a record of observed features including color, type, location and orientation of a variety of surface-mounted components, and terminal lead spacing data;

maintaining a database of a plurality of visually perceptible parameters of said features including colors;

numerically analyzing each of said observed features under a plurality of said visually perceptible parameters to locate defects therein; and

generating a graphical display indicating said defects.

2. The method of Claim 1, wherein said camera is a color digitizing camera of at least 4 million pixel resolution.

3. The method of Claim 1, wherein said numerically analyzing comprises:

comparing said record of observed features against a record of acceptable values; and

identifying said defects from said record of observed features which do not fall within said values.

4. The method of Claim 3, wherein said maintaining comprises:

entering assembly layouts including component type locations and orientation into said database.

5. The method of Claim 4, wherein said entering comprises interpreting a computer-aided design file describing said assembly.

6. The method of Claim 1, which further comprises:

identifying said assembly via a visual cue on a surface of said assembly, read by said camera; and

categorizing each of said assemblies within one of a plurality of assembly types.

7. The method of Claim 1, wherein said step of positioning comprises:

journaling said assembly along a conveyer; and

securing said assembly within view of said camera, wherein said securing has an acceptable tolerance coarser than two hundredths of an inch.

8. The method of Claim 1, wherein said obtaining

comprises:

scanning a first course resolution image of said assembly;

identifying a potentially defective region of said assembly; and

scanning a first fine resolution image of said region.

9. The method of Claim 1, which further comprises cataloging said list of defects.

10. The method of Claim 1, wherein said step of generating comprises:

displaying a template representing said assembly;

displaying a distinct static visual icon for each of said defects at a location on said template corresponding to the location each of said defects on said assembly.

11. The method of Claim 10, wherein said visual icon comprises indication of a type of defect.

12. The method of Claim 1, wherein said camera is mounted within an enclosure supported by wheels.

13. The method of Claim 1, wherein said obtaining comprises positioning said camera a distance of at least 12.7 centimeters above said board.

14. The method of Claim 1, wherein said analyzing comprises using a numerical rule-based color image analysis algorithm.